

STORING HUMAN MILK

The milk you express from your breasts for your baby is a precious fluid. It combines the best possible nutrition with antibodies, live cells, and other substances that protect babies from infection and help them grow and develop. When you make the effort to provide expressed milk for your baby for the times you can't be there for breastfeedings, you ensure that your baby continues to receive ideal nourishment and protection against allergies and disease.

You'll want to take good care of the milk you pump or hand-express. Think of it as a fresh, living substance—not just a food. How you store it will affect how well its nutritional and anti-infective qualities are preserved.

Human milk's anti-bacterial properties actually help it stay fresh longer. The live cells and antibodies in the milk that discourage the growth of bacteria in your baby's intestines also guard against bacterial growth when the milk is stored in a container.

The guidelines that follow apply to milk that will be given to full-term healthy babies.

CONTAINERS FOR STORAGE

You can use either hard-sided containers for storing milk or plastic bags. Hard-sided containers, either glass or plastic, do the best job of protecting the milk. Plastic milk storage bags, designed for freezing human milk, offer convenience and take up less room in the freezer.

The glass or plastic container should have a top that fits well. Containers should be washed in hot, soapy water, rinsed well, and allowed to air-dry before use. Don't fill them right up to the top—leave an inch of space to allow the milk to expand as it freezes.

Milk storage bags can be attached directly to a breast pump, so that mothers can collect and store milk in the same container. Some mothers use the disposable plastic nurser bags designed for bottle-feeding to store their milk. These are less durable and are not designed for long-term storage. They may burst or tear, but double-bagging can help prevent accidents. With either

kind of bag, squeeze out the air at the top before sealing, and allow about an inch for the milk to expand when frozen. Stand the bags in another container on the refrigerator shelf or in the freezer.

Put only two to four ounces of milk in each container, the amount your baby is likely to take in a single feeding. This avoids waste. Small quantities are also easier to thaw. You can add fresh milk to a container of frozen milk as long as there is less fresh milk than frozen. Cool the fresh milk for 30 minutes in the refrigerator before pouring it on top of the frozen milk in the freezer.

Be sure to label every container of milk with the date it was expressed. If the milk will be given to your baby in a day care setting, also put your baby's name on the label.

HOW LONG TO STORE HUMAN MILK

Whenever possible, babies should get milk that has been refrigerated, not frozen. Some of the anti-infective properties are lost when the milk is frozen—though frozen milk still helps protect babies from disease and allergies and is much better for your baby than artificial formula.

How long you can store milk depends on the temperature. Follow the guidelines in this table.

Previously frozen milk that has been thawed can be kept in the refrigerator for up to 24 hours. Thawed milk should not be refrozen. It is not known whether human milk left in the bottle after a feeding can be safely kept until the next feeding or if it should be discarded, as is the case with infant formula. Recent

WHERE	TEMPERATURE	TIME
At room temperature	66-72°F(19-22°C)	10 hours
In a refrigerator	32-39°F(0-4°C)	8 days
In a freezer compartment inside a refrigerator	Temperature varies	2 weeks
In a freezer compartment with a separate door	Temperature varies	3-4 months
In a separate deep freeze	0°F (-19°C)	6 months or longer



studies have shown that human milk actually retards the growth of bacteria, so it may be safe to refrigerate unused milk for later use.

Expressed human milk can be kept in a common refrigerator at the workplace or at a day care center. Both the US Centers for Disease Control and the US Occupational Safety and Health Administration agree that human milk is not among the body fluids that require special handling or storage in a separate refrigerator.

To keep expressed milk cool when a refrigerator is not available, place it in an insulated container with an ice pack. It's a good idea to use ice and an insulated container when transporting milk home from the workplace or to the babysitter's, especially on warm days.

USING STORED MILK

- Human milk may separate into a milk layer and a cream layer when it is stored. This is normal. Shake it gently before giving it to the baby to redistribute the cream.
- Human milk should be thawed and heated with care. Just as freezing destroys some of the immune properties of the milk, high temperatures can also affect many of the beneficial properties of the milk.
- Frozen milk: Containers should be thawed under cool running water. Gradually increase the temperature of the water to heat the milk to feeding temperature. Or immerse the container in a pan of water that has been heated on the stove. Take the milk out and rewarm the water if necessary. The milk itself should not be heated directly on the stove.
- Refrigerated milk: Warm the milk under warm running water for several minutes. Or immerse the container in a pan of water that has been heated on the stove. Do not heat the milk directly on the stove.
- Do not use a microwave oven to heat human milk. If the milk gets too hot, many of its beneficial properties will be lost. In general, milk for babies should not be heated in the microwave. Because microwaves do not heat liquids evenly, there may be hot spots in the container of milk, and this can be dangerous for infants.

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